

**What Is Claimed Is:**

1           1.    An emergency call processing system for mobile users,  
2 comprising:

3           a receiver, receiving emergency data calls from the mobile  
4           users; and

5           a queuing system, prioritizing incoming emergency data  
6           calls, and subsequently responding to each of the  
7           mobile users to address the emergency according to  
8           the emergency data calls.

1           2.    The emergency call processing system according to  
2 claim 1, the queuing system further comprising:

3           a first waiting buffer, storing incoming emergency data  
4           calls in a first-in-first-out (FIFO) manner;

5           a sorter, categorizing emergency data calls and  
6           prioritizing for each upon receipt from the first  
7           waiting buffer;

8           prioritized waiting buffers, receiving and storing  
9           emergency data calls from the sorter, wherein each  
10          prioritized waiting buffer is assigned to a different  
11          level of priority, and stores the emergency data  
12          calls with a corresponding level of priority; and

13          at least one processing unit, receiving and processing the  
14          emergency data calls from the prioritized waiting  
15          buffers according to their corresponding priority in  
16          a FIFO manner.

1           3.    The emergency call processing system according to  
2 claim 2, wherein the processing unit is operated by either  
3 operator or automated system.

1           4.    The emergency call processing system according to  
2    claim 1, wherein each of the emergency data calls carries caller  
3    phone number and a message reporting the emergency.

1           5.    The emergency call processing system according to  
2    claim 4, wherein the message is selectively one of voice, image,  
3    text and combinations thereof.

1           6.    The emergency call processing system according to  
2    claim 4, wherein each emergency data call further carries  
3    location information or personal information for the caller.

1           7.    The emergency call processing system according to  
2    claim 1, wherein a confirmation message is sent to each mobile  
3    user upon receipt of a corresponding emergency data call.

1           8.    The emergency call processing system according to  
2    claim 7, wherein the confirmation message comprises assigned  
3    registration identification.

1           9.    The emergency call processing system according to  
2    claim 1, wherein mobile users submit emergency data call and  
3    replies to an emergency call center automatically using client  
4    software installed in user equipment.

1           10.   The emergency call processing system according to  
2    claim 9, wherein the user equipment changes to automatic  
3    hand-shaking mode after receiving a confirmation message from  
4    the emergency call center.

1           11.   The emergency call processing system according to  
2    claim 10, wherein the emergency call center solicits relevant

3 information from mobile users in an alert message to the user  
4 equipment.

1 12. The emergency call processing system according to  
2 claim 11, wherein the alert message is sent via short message  
3 system (SMS).

1 13. The emergency call processing system according to  
2 claim 11, wherein the user equipment returns relevant  
3 information to the emergency call center automatically upon  
4 receipt of the alert message.

1 14. The emergency call processing system according to  
2 claim 13, wherein the user equipment also returns registration  
3 identification, provided beforehand by the emergency call  
4 center, with the relevant information.

1 15. The emergency call processing system according to  
2 claim 13, wherein the emergency call center utilizes an  
3 interleaving approach to periodically communicate with user  
4 equipment.

1 16. The emergency call processing system according to  
2 claim 11, wherein relevant information comprises location,  
3 caller's physical condition, current surrounding images, or  
4 combinations thereof.

1 17. An emergency call processing method for mobile users,  
2 comprising the steps of:  
3 receiving an emergency data call from user equipment (UE);  
4 and  
5 replying to the UE to confirm and address the emergency.

1        18. The emergency call processing method according to  
2 claim 17, further comprising prioritizing arrival emergency  
3 data calls.

1        19. The emergency call processing method according to  
2 claim 18, further comprising:  
3        storing the incoming emergency data calls in a first  
4        waiting buffer;  
5        categorizing the emergency data calls;  
6        determining and assigning a priority level for each  
7        emergency data call output from the first waiting  
8        buffer;  
9        assigning different priority levels to prioritized waiting  
10       buffers;  
11       storing each emergency data call in one of the prioritized  
12       waiting buffers according to the assigned priority  
13       level, wherein each prioritized waiting buffer  
14       operates in a first-in-first-out manner;  
15       processing emergency data calls stored in the prioritized  
16       waiting buffers according to the priority level  
17       assigned to the prioritized waiting buffer.

1        20. The emergency call processing method according to  
2 claim 17, wherein the emergency data call carries caller phone  
3 number and a message reporting the emergency.

1        21. The emergency call processing method according to  
2 claim 20, wherein the message is selectively one of voice, image,  
3 text and combinations thereof.

1        22. The emergency call processing method according to  
2 claim 20, wherein each emergency data call further carries  
3 location information or personal information for the caller.

1        23. The emergency call processing method according to  
2 claim 17, further comprising sending a confirmation message to  
3 the UE upon receipt of the emergency data call.

1        24. The emergency call processing method according to  
2 claim 23, wherein the confirmation message comprises  
3 registration identification.

1        25. The emergency call processing method according to  
2 claim 24, further comprising the UE switching to automatic  
3 hand-shaking mode after receiving a confirmation message.

1        26. The emergency call processing method according to  
2 claim 25, further comprising soliciting relevant information in  
3 an alert message to the UE.

1        27. The emergency call processing method according to  
2 claim 26, wherein the alert message is sent through a short  
3 message system (SMS).

1        28. The emergency call processing method according to  
2 claim 26, further comprising upon receipt of the alert message,  
3 the UE returns requested information in an automatic way.

1        29. The emergency call processing method according to  
2 claim 28, wherein the UE attaches registration identification  
3 to the relevant information for return.

1           30. The emergency call processing method according to  
2 claim 28, further comprising periodically communicating with  
3 the UE using an interleaving approach.

1           31. The emergency call processing method according to  
2 claim 26, wherein relevant information comprises location,  
3 caller's physical condition, current surrounding images, or  
4 combinations thereof.